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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/771,816 | 02/04/2004 | Masaru Murashita | 29A 3539 | 3963 |

7590 12/22/2008
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| EXAMINER |
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ROZANSKI, MICHAEL T

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| ART UNIT | PAPER NUMBER |
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3768

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12/22/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--|---|--|
| Office Action Summary | Application No. 10/771,816 | Applicant(s) MURASHITA ET AL. | |
| | Examiner MICHAEL T. ROZANSKI | Art Unit 3768 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 13-15 and 18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 13-15 and 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 8-9, 13-15, and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

-In claim 8, line 25, and claim 14, line 25, it is unclear how the two cavity cross section includes the left ventricle axis, since the two-cavity cross section is orthogonal to the reference cross section. It appears that the left ventricle major axis would be included in a cross section that is not orthogonal to the reference cross section, since the reference cross sections are set with the ventricle major axis as an axis of rotation.

-In claim 8, line 27, and claim 14, line 27, it is unclear how a center of mass can be included in a cross section.

-In claims 8 and 14, Applicant has claimed the cross sectional image corresponds to at least one of a four cavity cross section, a two cavity cross section, and a minor axis cross section. Applicant then further limits the claims in line 22-23 of each claim stating that the cross section is set as the four cavity cross section, and also further describes what the two cavity and minor axis cross sections refer to. First, it is unclear how the reference cross section can be at least one of three different types of cross sections, which implies the cross section can be either one, two, or all three of the

Art Unit: 3768

section types at the same time. For example, a four cavity cross section cannot also be a two cavity cross section. Further, it is unclear how the cross section can be at least one of three different section types and then be limited to being the four cavity cross section as in lines 22-23.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawagishi et al (US 6,352,509).

Kawagishi et al disclose a three-dimensional ultrasonic apparatus including a cardiac cavity detecting portion 8 comprising processors for executing a predetermined cardiac activity detection algorithm and detects data concerning the cardiac activity of the left ventricle of the heart based on the three-dimensional spatial distribution data from the echo or doppler processor by way of these processors (col 6, lines 7-12). The apparatus also includes extracting data of a cardiac endocardium M1 of a left ventricle LV corresponding to the boundary position of a cardiac cavity OB of the left ventricle from 3D morphological information (col 6, lines 28-35). A basis axis setter is used for setting a basis axis (long axis AX, or major axis) in the target tissue (left ventricle LV)

Art Unit: 3768

based on a shape of the target tissue (see figure 10). A reference cross axis setter (division plane PL) sets a plurality of reference cross sections each having a different rotational angle from each other with the basis axis AX as an axis of rotation (col 9, lines 37-40). A basis cross section selector is used to select a basis cross section from the plurality of reference cross sections based on a characteristic of the target tissue (col 9, lines 58-65). A cross sectional image former is used for forming a cross sectional image of the target tissue based on the volume data, which corresponds to one of cross sections set with the basis cross section as a reference and the basis cross section. Further the cross section is displayed (col 9, lines 55-58).

Double Patenting

Claims 14, 15, and 19 are objected to under 37 CFR 1.75 as being a substantial duplicate of claims 8, 9, and 13. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Response to Arguments

Applicant's arguments filed 10/30/08 have been fully considered but they are not persuasive. With respect to claim 1, Applicant argues that Kawagishi does not extract a group having a maximum volume or selecting a basis cross section from among a plurality of reference cross sections. However, Examiner disagrees. First, Kawagishi

Art Unit: 3768

specifically discloses that the left ventricle is extracted from the heart HE which has a plurality of isolated groups (col 6, lines 28-35). It is generally known that ventricles are approximately three times bigger than the atria and, further, that the left ventricle has about three times more muscle mass than the right ventricle. Therefore, the left ventricle is the largest chamber of the heart. Since Kawagishi extracts the left ventricle, the group having a maximum volume from among the plurality of groups is also extracted. With regard to selecting the basis cross section from a plurality of cross sections, Kawagishi discloses this as well. Specifically, plane PL is rotated about the left ventricle major axis AX, thereby setting a plurality of reference cross sections having a different rotational angle from each other. A basis cross section is selected from the reference cross sections and is set manually or automatically (col 9, lines 33-65).

With respect to arguments for claims 8 and 14, these are not persuasive in view of the remarks above and in view of the newly cited 112 rejection.

This action is made Non-Final in view of the newly added 112 and double patenting rejections.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL T. ROZANSKI whose telephone number is (571)272-1648. The examiner can normally be reached on Monday - Friday, 8-4:30.

Art Unit: 3768

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on 571-272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Eric F Winakur/
Primary Examiner, Art Unit 3768

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